

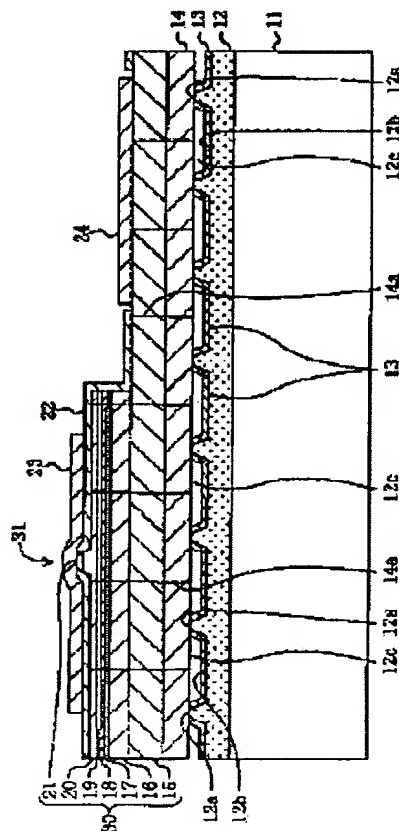
METHOD OF MANUFACTURING NITRIDE SEMICONDUCTOR, NITRIDE SEMICONDUCTOR DEVICE, METHOD OF MANUFACTURING THE SAME SEMICONDUCTOR LIGHT EMITTING DEVICE AND ITS MANUFACTURING METHOD

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Abstract of JP2002009004

PROBLEM TO BE SOLVED: To improve a nitride semiconductor formed through an ELOG method in crystallinity, to enable a resonator to have a large light confining coefficient, to form the resonator whose edge face is reduced in mirror loss, and to easily align a mask for forming a ridge. **SOLUTION:** A GaN seed layer 12 for ELOG is formed on a sapphire substrate 11 through the intermediary of a low-temperature GaN buffer layer, and stripe-shaped protuberant parts 12a extending in the plane direction of the substrate and separating from one another by a certain space are provided to the upper part of the GaN seed layer 12. In succession, a silicon nitride film 13 is formed on the bases and wall surfaces of recessed parts 12b each interposed between the protuberant parts 12a, and then a GaN selection growth layer 14 is formed above the seed layer 12, coming into contact with the protuberant parts 12a so as to form air gaps between its under surface and the bases of the recessed parts 12b.



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